



May 7, 1965

Malmborg/MÅ

Facit Punched Tape Products

Gentlemen:

Some time ago we wrote you in response to your request for information about our line of punched tape equipment. We are writing you now to inform you that our product line will be exhibited at the INTERDATA 65 exhibition, organized by the International Federation for Information Processing, to be held at the New York Hilton at Rockefeller Center, May 24th through May 27th, 1965. You are cordially invited to visit our exhibits (stands 66, 67 and 68).

The sale of our products in the United States was entrusted on January 1st, 1965, to our American subsidiary:

Facit-Odhner Inc., 222 East 44th Street,
New York, N.Y. 10017,

who have assumed responsibility for establishing a sales and service organization fully adequate to meet the requirements of the American market. Our representatives are qualified to handle any technical and engineering matters direct, and they welcome your enquiries.

Our product line includes the following punched tape equipment.

Tape Punch, Facit PE 1500

The punch operates at a top punching speed of 150 characters per second and generates conventional round-hole tapes. It is readily convertible between 5, 6-7 and 8 track tapes. The punch comprises two separate compact units, a punch unit and a control unit.

Throughout Europe, the Facit punch has firmly established itself as an output unit of pre-eminent value. High speed, operating reliability and ease of adaptation are the major factors which account for its wide use in data processing, data transmission and data recording applications. IBM, among others, offer their customers standard Facit punch adapters for a number of IBM systems.

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The tape reader reads punched tapes at 500 or 1000 characters per second. The tape supply apparatus needed depends on the desired reading speed, and is optional. For the reading speed of 500 characters per second, a simple tape supply wheel is adequate. For the reading speed of 1000 characters per second, a self-adjusting tape spooling device is required. The latter may be employed either for dispensing or rewinding tape. The reader, which consists of a single compact unit, is easily convertible for 5, 6-7 and 8 track tapes.

Tape reader,
Facit PE 1000

The Facit reader is one of the leading tape readers in use in Europe. Its exceptional speed makes it particularly well adapted to the demands of high speed computers. Thanks to the dielectric reading principle, it is far less sensitive to dust than readers employing photoelectric components.

As in the case of the tape punch, IBM has independently developed an adapter to connect the Facit tape reader to IBM computer systems.

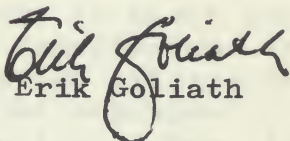
The tape reproducer links the Facit reader and punch to form an apparatus for high-speed copying and editing of punched tapes. The reproducer consists of a control cabinet with controls for continuous or single character copying or reading; repeated or single step punching of the character in the buffer store; and pre-planned termination of copying or reading at any character specified in the coincidence store switches.

Tape reproducer,
Facit PE 1300

All of the above products will be displayed at the INTERDATA 65 exhibition. We should be pleased to have the opportunity of meeting you and of demonstrating our equipment for you.

Very truly yours,

AB ÅTVIDABERGS INDUSTRIER
Electronic Products


Erik Goliath



FACIT PE 1300

Reproducing equipment for punched tape



FACIT PE 1300

The tape reproducer PE 1300, together with the tape reader Facit PE 1000 and the tape punch Facit PE 1500, provides a complete punched tape reproducing and editing equipment. Minor corrections or amendments and the omission and introduction of a small number of characters can be carried out. The speed of reading, punching and reproducing can be varied in stages up to a maximum speed which, during combined operations, is determined by the maximum speed of the slowest operation. Operations can also be carried out for individual characters. The Facit PE 1300 contains a buffer store which is capable of storing one character of eight bits. The content of the buffer store, which corresponds to the latest character which has been read from the tape, can be visually examined by means of indicator tubes. Data may be inserted manually into the buffer store by means of switches.

Among other things, the tape reproducer PE 1300 can be used for: ■ Continuous or single step reproduction via the buffer store. ■ Repeated or single step punching of the contents of the buffer store. ■ Searching for a desired character on a tape. The tape can be halted when a punched character is identical to a character inserted into the buffer store. Braking takes place when the desired character is read and is completed before the reading of the following character.

The equipment is suitable for: ■ Quick and simple reproducing and editing of punched tape. ■ Transfer of information, with retained code, from Olivetti tape to standard tape. ■ Collocation of data from short tapes onto long tapes.

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The background of the entire page is a complex abstract design. It features a central vertical band that is split into a light cream-colored left half and a dark navy blue right half. The cream half is decorated with a pattern of small blue dots of varying sizes, some arranged in vertical columns and others in small clusters. The navy blue half features a pattern of small light blue squares, some arranged in vertical columns and others in small clusters. This central band is flanked by horizontal bands of light blue and white. At the bottom of the page, there is a large, solid light blue rectangular area. In the center of this bottom area, there is a white circle with a small blue dot inside it.

FACIT PE 1000

tape reader
for
up to
1000
characters
per
second

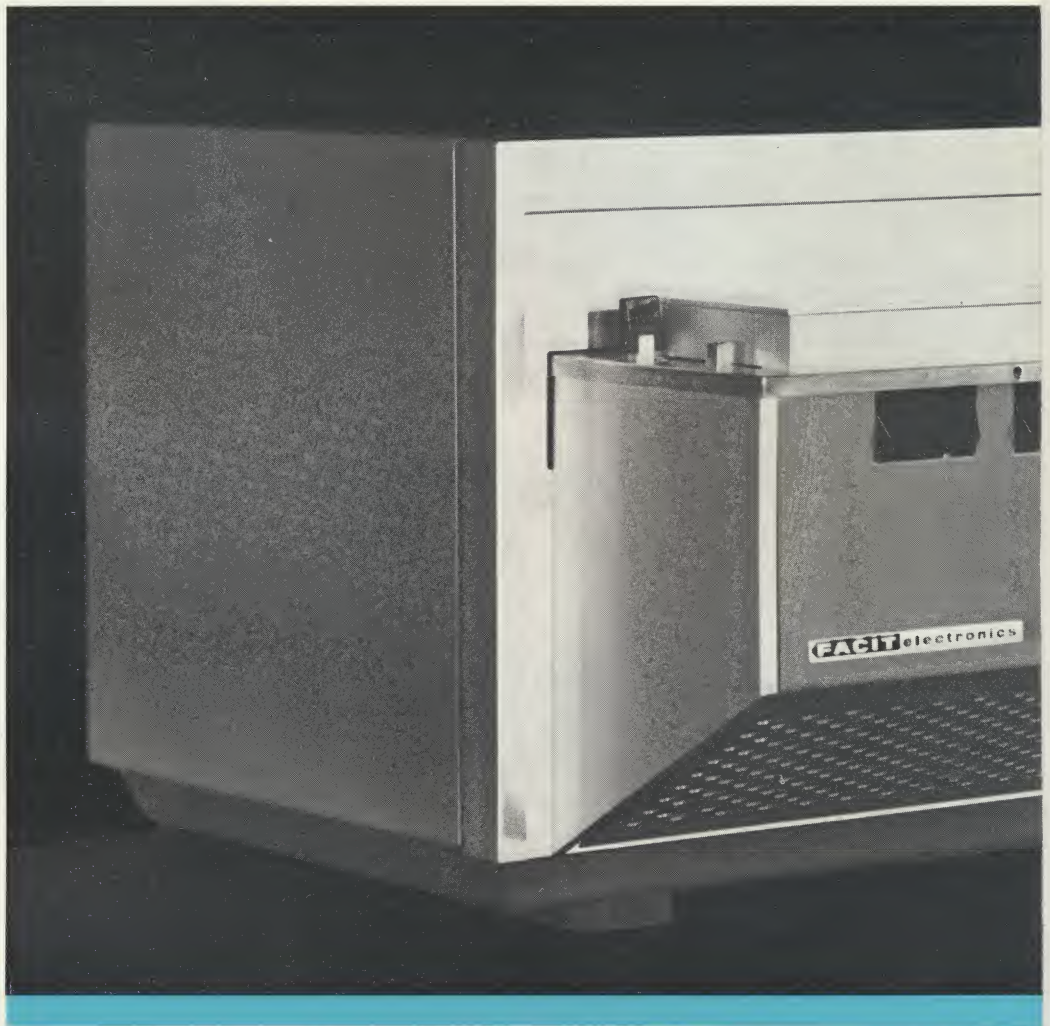
FACIT PE 1000

Reliable high-speed reading

is a phrase that typifies the Facit PE 1000 paper tape reader which incorporates benefits gained at Facit from many years of experience. Behind the world-famous reputation of the Facit trade mark lie quality and integrity, two attributes of the Facit PE 1000. It satisfies the most stringent demands that can be placed on modern paper tape readers.

Universal application

Facit PE 1000 design is compatible with nearly all data processing systems. But it finds uses in other fields too — wherever reliable high-speed reading is required.

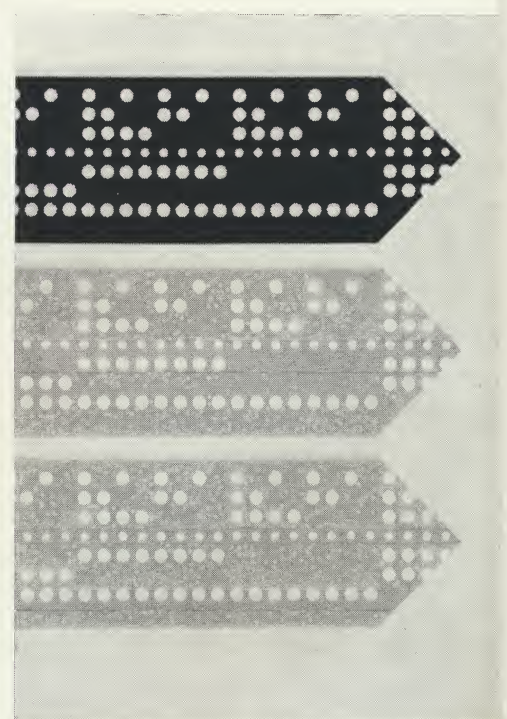
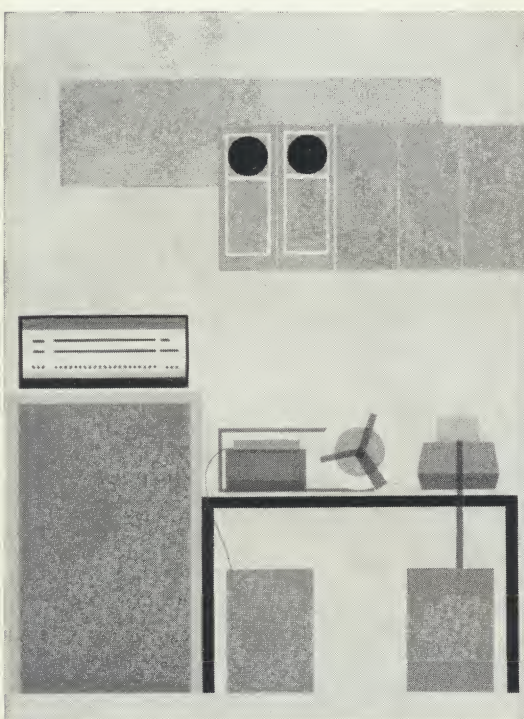


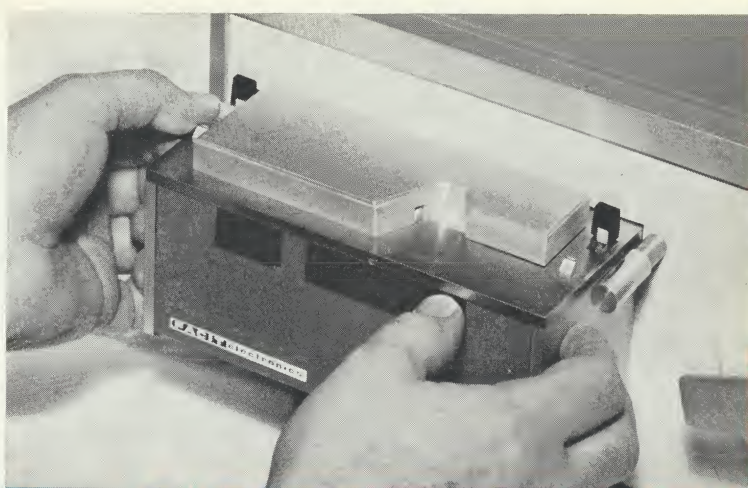
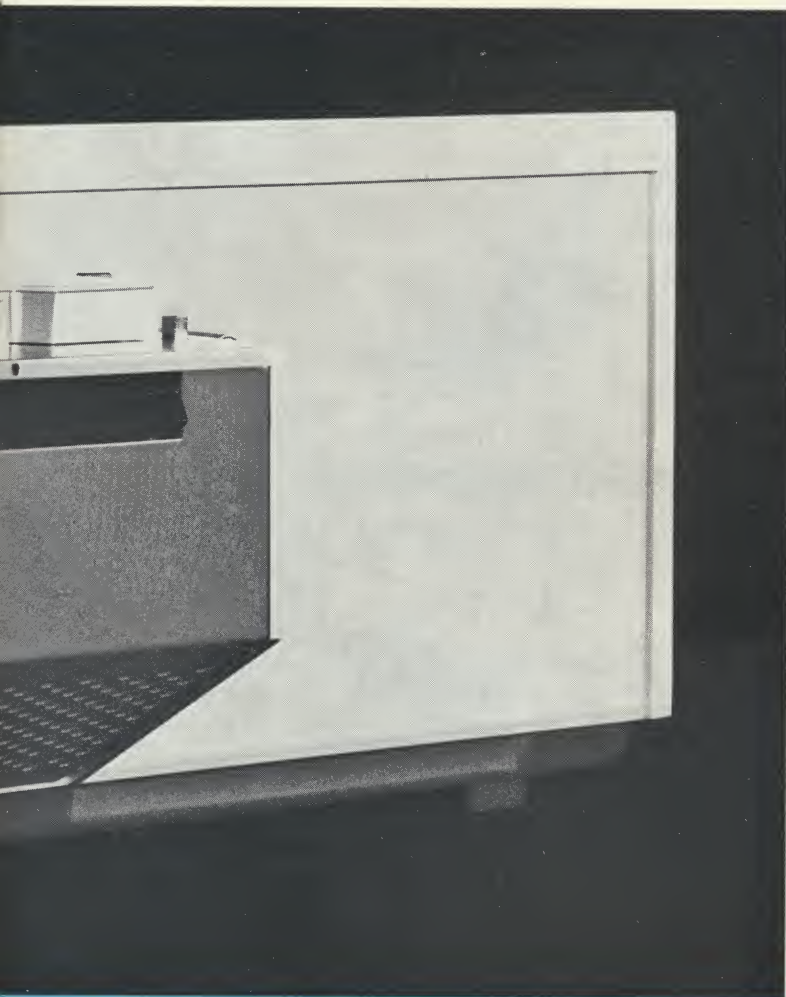
Facit PE 1000 — basic reading unit.

Reading programs and blocks of data directly into data processing systems; off-line read-in to magnetic tape memories, output devices and plotters.

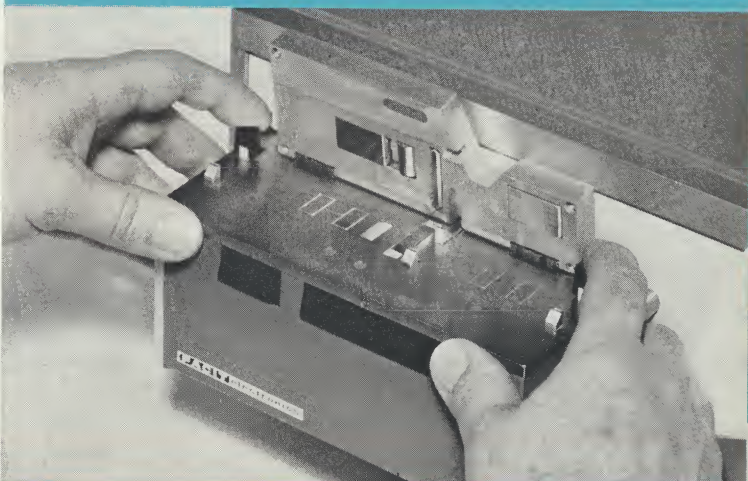
Data transmission.

Duplication of tapes on special equipment, for example Facit PE 1300, which replaces worn tapes and makes conversions between various track-systems, tape materials and codes.





1



2

7 imposing features

Flexible — versions for standard or Olivetti tapes, convertible for 5, 6, 7 or 8 tracks, reading and winding at 500 ch/s or 1000 ch/s.

Dielectric reading — radical new design departure eliminates risk of reading mistakes. Reading head contains no components which age. Unaffected by dust, dirt and incident light. Reads all tape colours — even transparent tape.

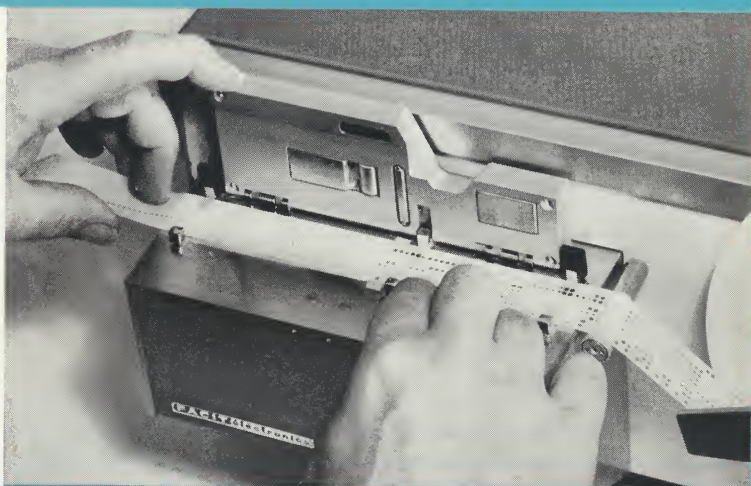
Few movable parts — reliable operation.

Compact, convenient size

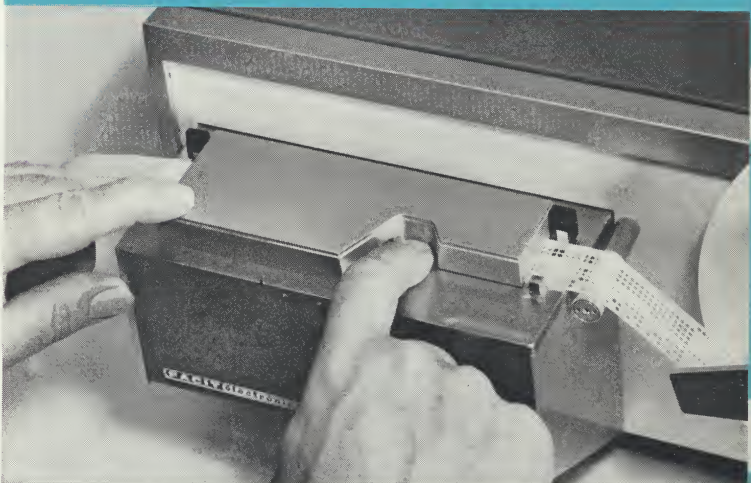
Quiet operation — a hushed whir is all you hear, thanks to solid construction and well-damped mechanical movement.

Converts quickly — with a simple hand motion for different numbers of tracks. (See fig. 2)

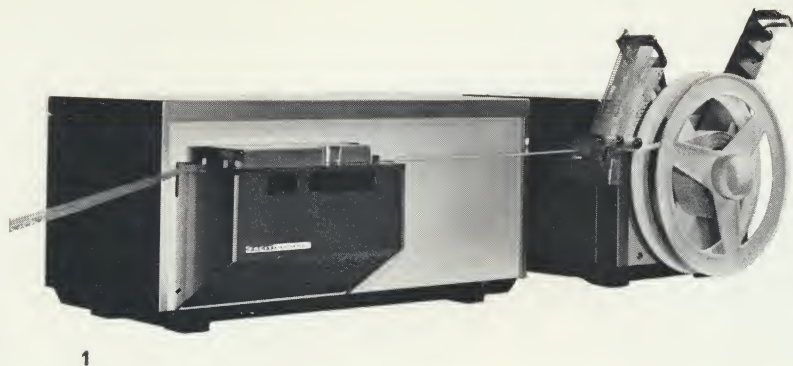
Easy to load — you can load a new reel of tape in approx. 5 seconds. (See fig. 1—4)



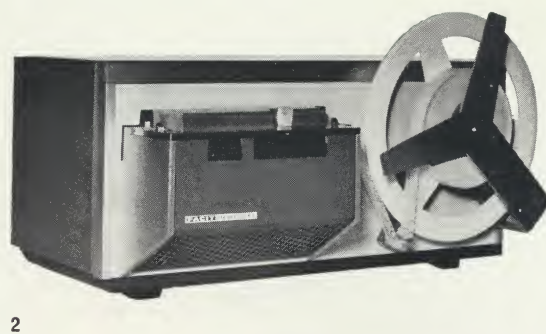
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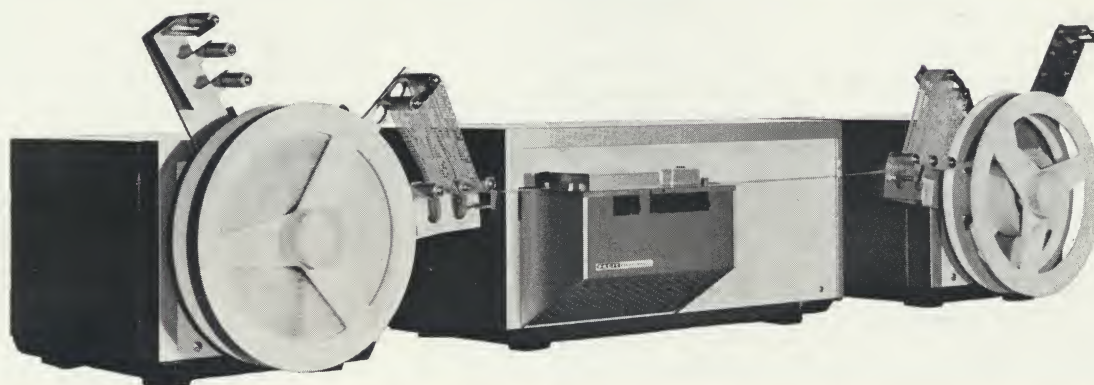
4



1



2



3

1
Facit PE 1000 paper tape reader with Facit PE 1130 arranged for unwinding. Maximum speed 1000 ch/s.

2
Facit PE 1000 paper tape reader with supply wheel permitting operation at maximum speed of 500 ch/s.

3
Facit PE 1000 paper tape reader with Facit PE 1130 wind and unwind equipment. Maximum speed 1000 ch/s.

(ch/s = characters/second)

Data

Type	PE 1001	220 V 50 Hz 5, 6, 7 or 8 tracks
	PE 1004	117 V 60 Hz "
	PE 1005	220 V 50 Hz Olivetti tapes
Tape width	5-track	17.5 mm (11/16")
	6 and 7 track	22.2 mm (7/8")
	8-track	25.4 mm (1")
	Olivetti	20.5 mm
Tape thickness	max. 0.15 mm, min. 0.05 mm, max. 0.2 mm at splice	
Mains voltage frequency and power	220 V or 115 V. 50 cycles. 60 cycles. 120 Watts.	
Reading speed	0—500 or 0—1000 characters per second for standard tapes. Reading speed 0—400 or 0—800 for Olivetti tapes due to increased spacing. Changeover to desired maximum reading speed is made with a selector switch at rear of reader. The reader stops between characters — even at a speed of 1000 characters per second.	
Dimensions	Length	430 mm (17")
	Width	280 mm (11")
	Height	195 mm (7 3/4")
Output information signals	5—8 tracks and feed-hole track. Negative level at hole.	

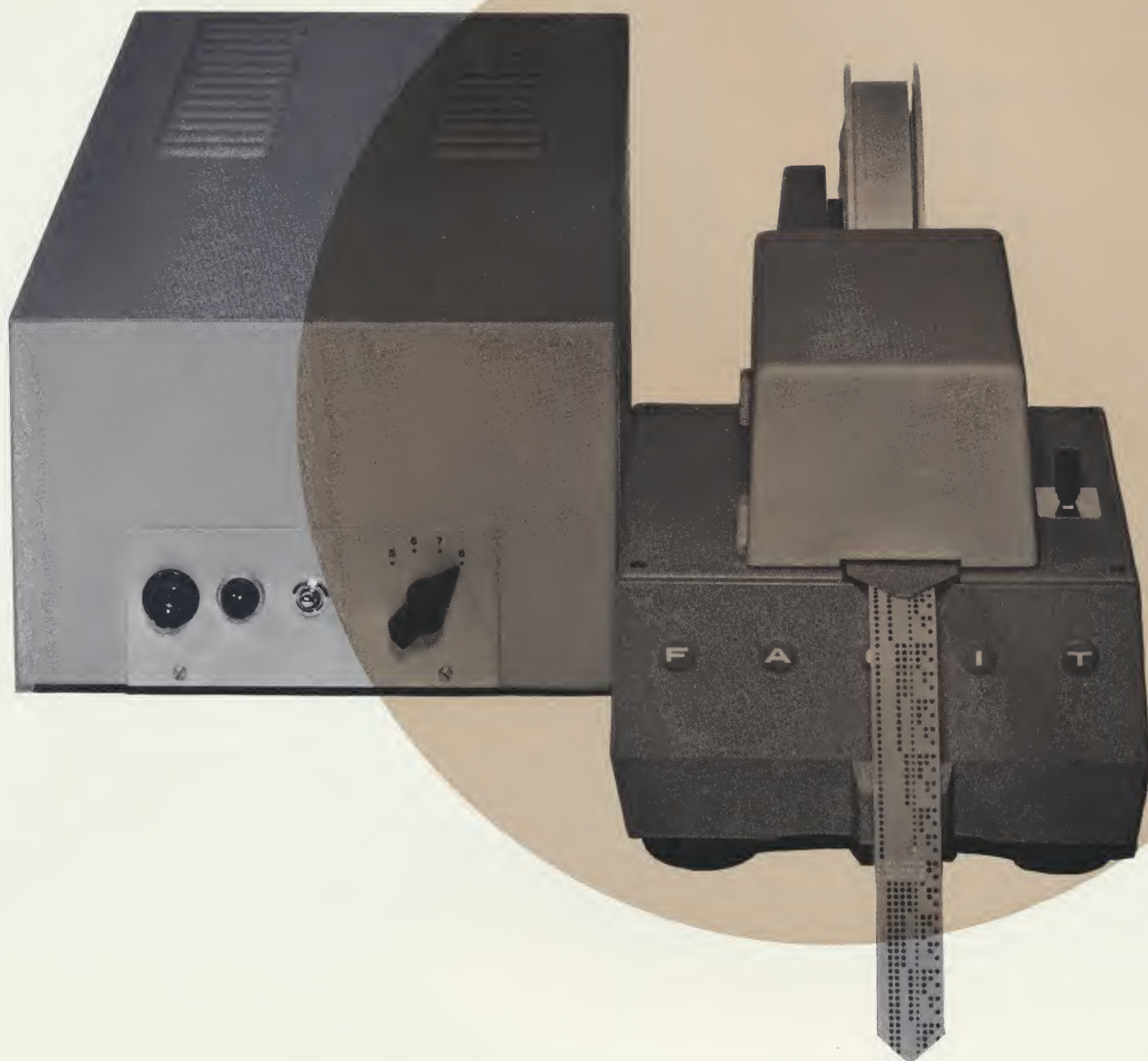
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FACIT PE 1500
High-speed paper tape punch



FACIT PE 1500

High-speed tape punch featuring electronic control

Convertible for 5, 6, 7 or 8-track tape

Punches up to 150 characters per second

PERFORATED TAPE

Tape width:

5-track tape, standard 11/16 inch 17.5 mm

6-track tape, standard 7/8 inch 22.2 mm

7-track tape, standard 7/8 inch 22.2 mm

8-track tape, standard 1 inch 25.4 mm

Distance be-

tween columns: 0.1 inch 2.54 mm

Tape reel —

outer diameter: 7.87 inch 200 mm

Tape reel —

inner diameter: 1.97 inch 50 mm

Tape thickness: adjustable for 0.00315 inch—

0.00472 inch 0.08 mm—0.12 mm

Tape length: 1000 feet approx. 300 m

which corresponds to
120,000 characters

MECHANICAL DATA

Punching speed: Max. 150 characters (columns) per second.

Feed: Intermittent, controlled externally.

Maximum dimensions:

Mechanical section: length 20.31 inch 516 mm,
width 8.27 inch 210 mm, height 8.58 inch 218 mm.

Electronic section: length 20.55 inch 522 mm,
width 10.31 inch 262 mm, height 7.08 inch 180 mm.

Weight:

Mechanical section 36 1/2 lb. 16.5 kg

Electronic section 33 lb. 15.0 kg

Construction: Punches and dies made from high-alloy steel. Waste chad falls through flexible plastic tube.

Cabinet is finished in grey enamel.

ELECTRONIC DATA

Start pulse:

Negative 0.1—3 ms

Upper level between +1 V and +25 V

Lower level between -4 V and -25 V

Input impedance 5 kilohms.

Information lines:

5, 6, 7 or 8 parallel lines.

DC voltage, or a negative pulse at least 0.1 ms in length which occurs simultaneously with the start pulse.

Upper level between +1 V and +25 V: no hole.

Lower level between -4 V and -25 V: hole.

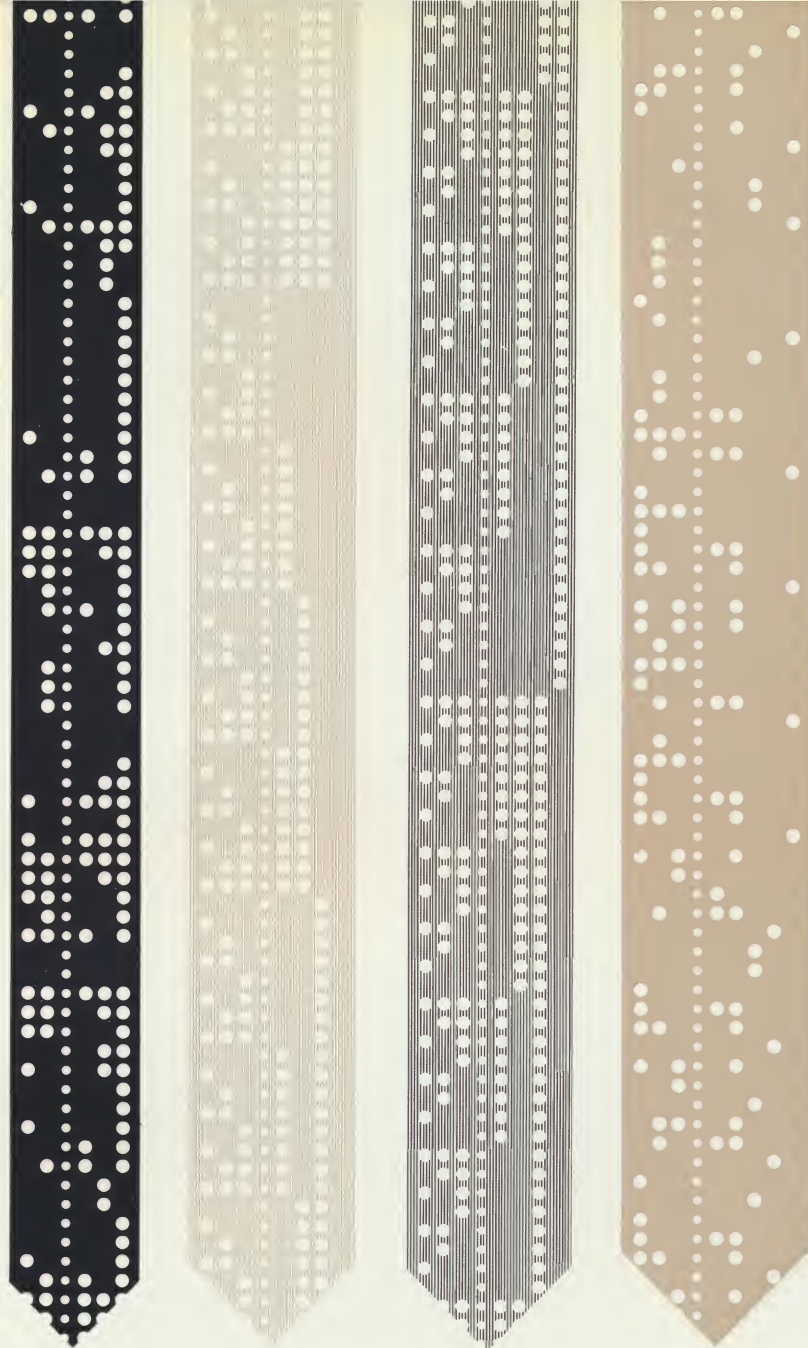
Input impedance 5 kilohms.

Ready signal: From -10 V to +1 V after register input is completed. Max. rising transition time 10 μ s.

From +1 V to -10 V when punching is completed. Max. falling transition time 10 μ s.

Output impedance 500 ohms.

Input register: Built-in, stores one character.

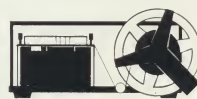
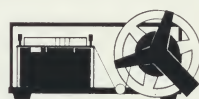
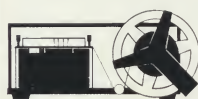


For 5, 6, 7 or 8-track tape

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FACIT PE 1000
High-speed paper tape reader
— 1000 characters per second



FACIT



application notes



6/1964

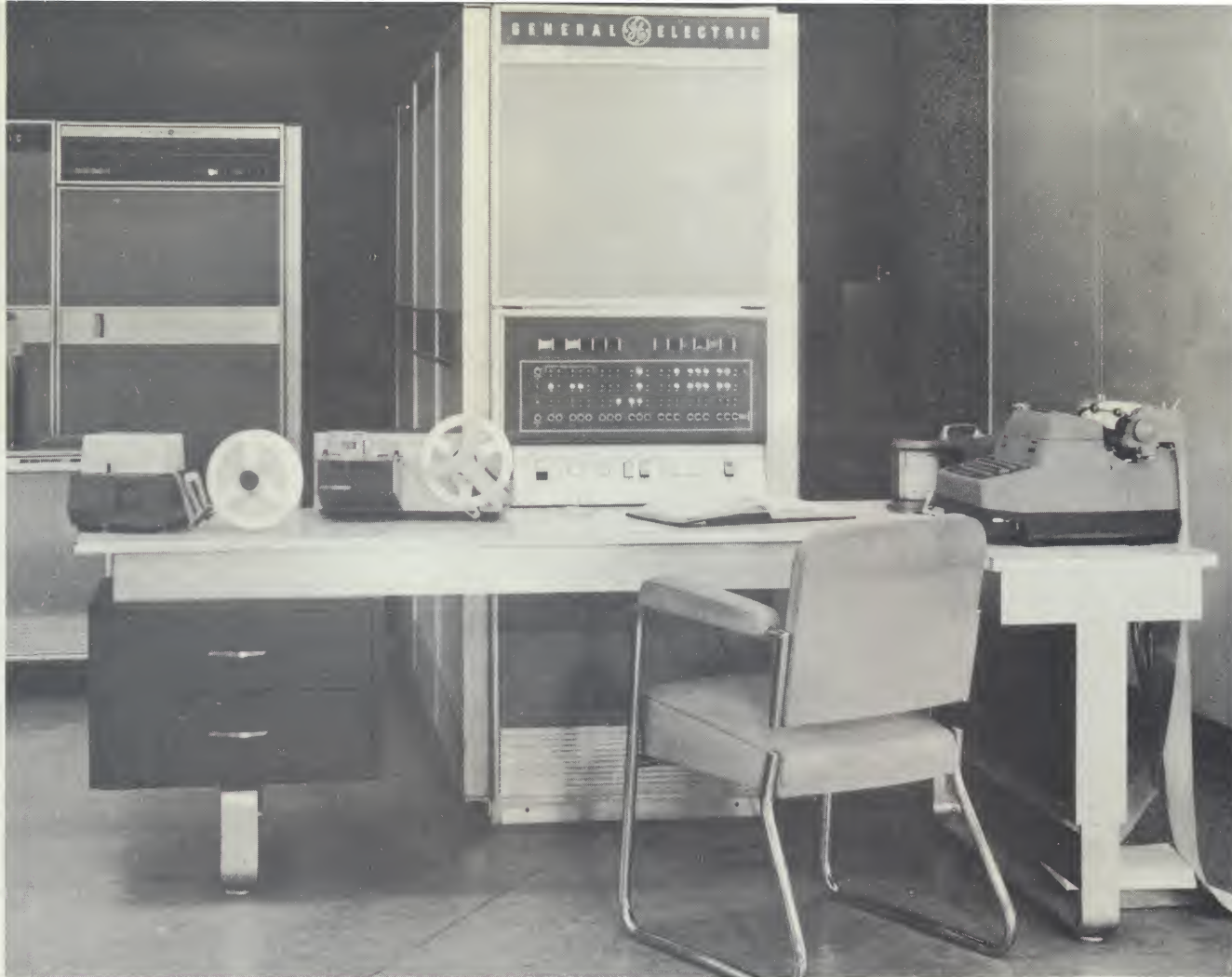
FACIT PUNCHED TAPE PRODUCTS FOR AUTOMATIC DATA HANDLING SYSTEMS

Over the past years, Facit punched tape products have been widely used in conjunction with numerous computers and data processing systems throughout Europe. These products consist of the FACIT PE 1000 tape reader and the FACIT PE 1500 tape punch.

Installed at AB Götaverken, Sweden, this Univac III computer is equipped with FACIT PE 1000 tape readers for standard and Olivetti tapes.

A selection of data handling systems equipped with Facit punched tape products is illustrated below.



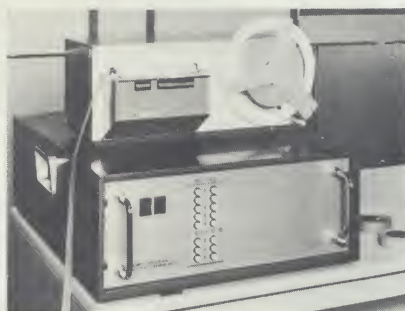


General Electric 225 computer equipped with the FACIT PE 1000 tape reader and the FACIT PE 1500 tape punch in use at a data processing centre in Paris.



Telefunken TR 10 computer equipped with the FACIT PE 1000 tape reader and the FACIT PE 1500 tape punch installed at AEG Allgemeine Elektrizitäts-Gesellschaft, Berlin.

Siemens 2002 computer equipped with the FACIT PE 1000 tape reader installed at Finska Kabelfabriken AB, Finland.



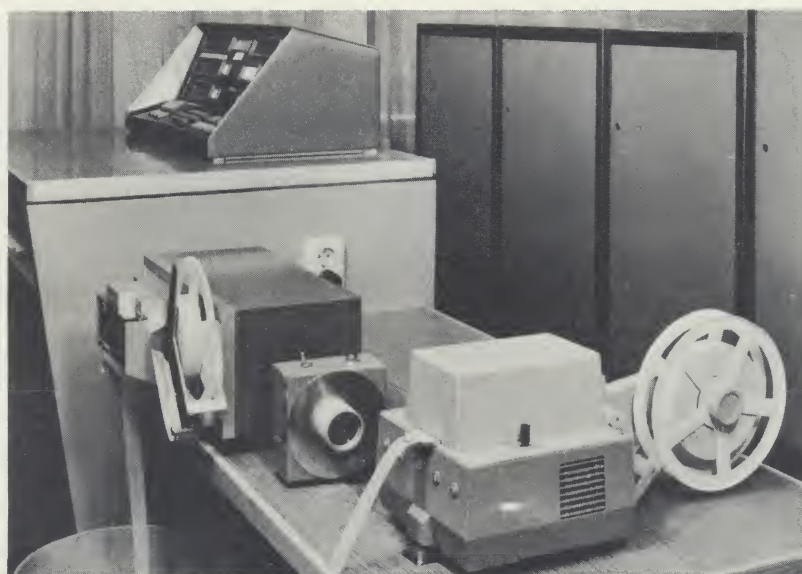
Facit DS 9000 computer equipped with FACIT tape reader and tape punch as supplied to the Swedish Air Force.

Royal Precision Corporation RPC 4000 computer at the International Federation's Information Processing exhibition in Munich 1962, equipped with the FACIT PE 1500 tape punch.





IBM 1401 computer equipped with the FACIT PE 1000 tape reader which is field installed at Sveriges Förenade Tri-
kåfabriker, Sweden.



SAAB D 21 computer built by Svenska Aeroplan Aktiebolaget, Sweden, installed at AB Skandinaviska Elverk and equipped with the FACIT PE 1000 tape reader and the FACIT PE 1500 tape punch.



Bull CAB 500 computer equipped with the FACIT PE 1000 tape reader and the FACIT PE 1500 tape punch installed at Compagnie Française Thomson-Houston, France.



Control Data 3600 with the FACIT PE 1500 tape punch and the FACIT PE 1000 tape reader used by the Kjeller Computer Installation, Norway, owned and operated jointly by the Institute of Atomic Energy and the Norwegian Defence Research Establishment.



GIER computer at Regnecentralen A/S, Denmark, equipped with the FACIT PE 1500 tape punch.

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